IN THE CLAIMS

1. (Currently amended) A storage system comprising:

a plurality of control units each connected with a ~~plurality of~~ respective disk ~~units~~ unit,

each of the plurality of the control units including

a ~~plurality of~~ replication creation ~~units~~ unit ~~corresponding to the plurality of the control units, respectively~~, each of the replication creation units being adapted to create a replication of the data of the volume [[in]] relating to the disk unit connected with the corresponding control unit; and

a plurality of volume pair information corresponding to the plurality of the control units, respectively, each of the volume pair information designating an original volume and a replication volume,

a plurality of logical volumes corresponding to at least one of said disk drives;

wherein the replication creation unit of a first control unit operates in such a manner that

in the case where a replication is created in the volume [[in]] relating to the disk unit connected to [[a]] the first control unit, the volume information of the original volume and the volume information of the replication volume are registered in the volume pair information, and a replication is created in the volume [[in]] relating to the

disk unit connected to the first control unit based on the volume pair information, and

in the case where a replication is created in the volume [[in]] relating to the disk unit connected to a second control unit, the volume information of the original volume, ~~the volume information of the replication volume~~ a virtual volume information of a virtual replication volume corresponding to at least one logical volume of the second control unit, and the information on the second control unit are registered in the volume pair information, and a request to create a replication is transmitted to the second control unit based on the volume pair information.

2. (Original) A storage system according to Claim 1,

wherein each of the control units includes a cache memory for temporarily storing the data; and

wherein the replication creation unit of the first control unit, in creating a replication in the volume of the disk unit connected to the second control unit, copies the data of the original volume as a data for the replication volume in the cache memory of the first control unit, and transmits the copy data in the cache memory to the second control unit.

3. (Currently amended) A storage system according to Claim 2,

wherein the second control unit stores the data received from the first control unit in the cache memory of the second control unit, after which the data is stored in the volume [[in]] relating to the disk unit connected to the second control unit.

4. (Original) A storage system according to Claim 1,

wherein the volume information of the replication volume of the first control unit registered in the volume pair information by the first control unit in the case where a replication is created in the volume of the disk unit connected to the second control unit is virtual ID information for identifying, in the first control unit, the volume of the disk unit connected to the second control unit; and

wherein the information on the second control unit registered in the volume pair information by the first control unit in the case where a replication is created in the volume of the disk unit connected to the second control unit is ID information for identifying, in the second control unit, the second control unit and the replication volume of the disk unit connected to the second control unit.

5. (Original) A storage system according to Claim 1,

wherein the volume pair information includes an identifier assigned to the volume pair of the original volume and the replication volume, and

wherein one or a plurality of the identifiers are assigned to the one original volume.

6. (Original) A storage system according to Claim 1,

wherein the replication creation unit registers information in the volume pair information based on selected one of the information input from a user input/output apparatus and a host command received from a host.

7. (Original) A storage system according to Claim 1,

wherein each of the control units further includes a plurality of normal read/write processing queues corresponding to the plurality of the control units, respectively, each of the queues being adapted to form a schedule for a normal read/write request, and a plurality of low job priority queues corresponding to the plurality of the control units, respectively, each of the low job priority queues being adapted to form a schedule for a request low in job priority than the normal read/write request;

wherein in the case where a request for creating a replication is processed equivalently to the normal read/write

request, the control unit places a request for creating a replication in the normal read/write processing queue, while in the case where a request for creating a replication is processed in the order of priority lower than the normal read/write request, the control unit places the replication creation request in the low job priority queue.

8. (Original) A storage system according to Claim 1,

wherein each of the control units further includes a plurality of job priority set units corresponding to the plurality of the control units, respectively, each of the job priority set units determining the job priority information as to whether a request for creating a replication is to be processed equivalently to the normal read/write request, the job priority set unit notifying the job priority order information to the other control units, and

wherein a control unit that has received the notification of the job priority information from other control units forms a schedule for sequentially processing the requests based on the job priority information thus received.

9. (Original) A storage system according to Claim 1,

wherein in the case where the first control unit transmits a request for creating a replication to the second control unit, the information indicating a replication

creating process is added to the control instruction for transmitting the replication creation request, and

wherein the second control unit that has received the control instruction determines whether the request is to be processed in priority, based on the information indicating a replication creation process, and forms a schedule for sequentially processing the requests.

10. (Original) A storage system according to Claim 1,

wherein in the case where the first control unit transmits a request for creating a replication to the second control unit, the information indicating the priority order is added to the replication creation request, and

wherein the second control unit determines as to whether a replication creation request is processed in priority based on the received information indicating the priority, and forms a schedule for sequentially processing the replication creation requests.

11. (Currently amended) A method of creating a replication in a storage system including a plurality of control units each connected with a ~~plurality of~~ respective disk ~~units~~ unit, comprising the steps of:

registering in a first control unit [[the]] original volume information and [[the]] replication volume

information as [[the]] volume pair information, in the case where a replication of the data of the volume [[in]] relating to the disk unit connected to the first control unit is created in the first control unit;

registering in the first control unit the original volume information, the replication volume information in the first control unit and the information on the second control unit as the volume pair information of the first control unit, in the case where a replication of the data of the volume [[in]] relating to the disk unit connected to the first control unit is created in the volume of the disk unit connected to the second control unit;

generating in the first control unit a replication of the volume [[in]] relating to the disk unit connected to the first control unit, based on the volume pair information, in the case where a replication of the data of the volume [[in]] relating to the disk unit connected to the first control unit is created in the volume [[in]] relating to the disk unit connected to the first control unit; and

sending from the first control unit a replication creation request to the second control unit based on the volume pair information, in the case where a replication of the data of the volume [[in]] relating to the disk unit connected to the first control unit is created in the volume of the disk unit connected to the second control unit.

12. (Original) A replication creation method according to Claim 11,

wherein each of the control units has a cache memory for storing the data temporarily,

the method further comprising the steps of copying in the first control unit the data of the original volume to the cache memory of the first control unit, and sending from the first control unit the data stored in the cache memory to the second control unit.

13. (Currently amended) A replication creation method according to Claim 12, further comprising the steps of:

storing, in the second control unit, the data received from the first control unit into the cache memory of the second control unit, and

storing, in the second control unit, the data in the cache memory of the second control unit into the volume [[in]] relating to the disk unit connected to the second control unit.

14. (Currently amended) A replication creation method according to Claim 11,

wherein in the case where a replication is created in the volume of the disk unit connected to the second control unit, the volume information of the replication volume in the

first control unit to be registered by the first control unit in the volume pair information is virtual ID information for identifying, in the first control unit, the volume of the disk unit connected to the second control unit, and

wherein in the case where a replication is created in the volume of the disk unit connected to the second control unit, the information on the second control unit to be registered by the first control unit as volume pair information is the information for identifying the second control unit and the information for identifying, in the second control unit, the replication volume [[in]] relating to the disk unit connected to the second control unit.

15. (Original) A replication creation method according to Claim 11,

wherein the volume pair information includes an identifier assigned to the pair of the original volume and the replication volume, and

wherein one or a plurality of identifiers are assigned to each original volume.

16. (Original) A replication creation method according to Claim 11,

wherein the first control unit registers the information in the volume pair information based on selected

one of the information input from a user input/output apparatus and a host command received from the host.

17. (Original) A replication creation method according to Claim 11,

wherein a storage system comprising a plurality of control units each including a normal read/write processing queue to schedule the normal read/write request, and a low job priority queue to schedule the request lower in priority than the normal read/write request, and

wherein in the case where a replication creation request is processed equivalently to the normal read/write request, the control unit places the replication creation request in the normal read/write processing queue, while in the case where a replication creation request is processed in a priority lower than the normal read/write request, the replication creation request is placed in the low job priority queue.

18. (Original) A replication creation method according to Claim 11,

wherein the storage system has a job priority set unit for each of the control units,

wherein the job priority set unit of the first control unit sets the job priority as to whether a replication

creation request is to be processed equivalently to a normal read/write request, and notifies the job priority information to the second control unit, and

wherein the second control unit forms a schedule for sequentially processing the replication creation requests based on the job priority information thus received.

19. (Original) A replication creation method according to Claim 11,

wherein the first control unit transmits a replication creation request to the second control unit with the information indicating a replication creating process, and

wherein the second control unit determines whether the received replication creation request is to be processed in priority or not, based on the information indicating a replication creation process, and forms a schedule for sequentially processing the replication creation requests.

20. (Original) A replication creation method according to Claim 11,

wherein the first control unit transmits a replication creation request to the second control unit with the information indicating the order of priority, and

wherein the second control unit determines whether the replication creation request is to be processed in

priority or not, based on the information indicating the order of priority, and forms a schedule for sequentially processing the replication creation requests.

21. (New) A storage system according to Claim 1, wherein in the case where a replication is created in the volume relating to the disk unit connected to the second control unit, the replication creation unit of the first control unit issues to the second control unit a request to write the data corresponding to the virtual replication volume to the at least one logical volume of the second control unit corresponding to the virtual replication volume.

22. (New) A replication creation method according to Claim 11, wherein the step of sending a replication creation request from the first control unit to the second control unit includes sending a request to write data from the virtual replication volume in the first control unit to a logical volume corresponding thereto in the second control unit.